

FEB. 28. 2007 7:12PM

866 741 0075

RECEIVED  
CENTRAL FAX CENTER

NO. 0030 P. 4

FEB 28 2007

Docket No. 740709-507  
Application No.: 10/628,240  
Page 2 of 15

**Amendments to the Drawings:**

Please replace existing Figure 1-3 with corrected Figures 1-3 shown on the three (3) replacement sheets submitted herewith. The figures have been corrected to informalities pointed out by the Examiner. No new matter has been added.

10325305.1

FEB 28 2007

Docket No. 740709-507  
Application No.: 10/628,240  
Page 11 of 15**REMARKS**

Claims 1 and 5-17 were pending in this application prior to the office action. By this amendment, claims 1 and 8 are amended, and claims 9-17 are canceled. No new claims were added. Thus, claims 1 and 5-8 are now pending. In view of the above amendments and the following remarks, Applicants respectfully request reconsideration and allowance of the application.

**Objections to the Drawings**

The drawings stand objected to under 37 C.F.R. § 1.83(a). In particular, the Examiner asserts that the drawings must show every feature of the invention specified in the claims, and that the features recited in claim 9 (related to an electronic apparatus having the inventive flexible heat exchanger on a surface thereof), claim 10 (related to an electronic part having the inventive flexible heat exchanger on a surface thereof), and claim 11 (related to a solar heat collector having the inventive flexible heat exchanger on a surface thereof) must either be shown in the figures or be canceled in the claims. Applicants submit that this objection is moot in view of the cancellation of claims 9-11 herein.

In addition, the drawings stand objected to because of the following informalities asserted by the Examiner: (a) the portion of Fig. 1 following the arrow fails to show any reference numbers thereon; and, (b) the cross-hatching appearing in both Fig. 2 and Fig. 3. Corrected Figs. 1-3 are submitted herewith, with (a) the arrow being removed from Fig. 1, and (b) the cross-hatching being removed from Figs. 2 and 3. No new matter has been added. Accordingly, Applicants submit that these objections are overcome, and should be withdrawn.

FEB 28 2007

Docket No. 740709-507  
Application No.: 10/628,240  
Page 12 of 15**Objections to the Specification**

The abstract of the disclosure stands objected to because the Examiner asserts that it fails to fully summarize the characterizing features of the invention as claimed. Applicants submit herewith a new Abstract that is descriptive of the invention. No new matter has been added. Accordingly, Applicants submit that this objection should be withdrawn.

The disclosure stands objected to because of the following informality asserted by the Examiner: the acronyms "MD" and "TD" [page 5, line 4] are neither accompanied by the corresponding plain English meaning nor are they art-recognized. Applicants herein amend the paragraph beginning on page 5, line 3, to clearly disclose that "MD" refers to "Machine Direction" and "TD" refers to "Traverse Direction." No new matter has been added. Accordingly, Applicants submit that this objection should be withdrawn.

The specification stands objected to as failing to provide proper antecedent basis for the claimed subject matter. In particular, the Examiner asserts that there is no proper antecedent basis in the specification for the term "plane" as used in the claims [claim 1, line 1, and other occurrences]. However, claim 1 as amended herein no longer recites this term. Accordingly, Applicants submit that this objection is now moot and should be withdrawn.

In addition, the Examiner asserts that the use of the trademarks such as "Florinate" [page 6, line 3], "PGS Graphite Sheet" [page 6, line 18], "Upilex S" [page 9, line 12; page 9, line 34], and "Technola Felt" [page 9, line 16] should be capitalized wherever they appear and be accompanied by the corresponding generic terminology. The portions of the Specification identified above have been amended herein to better disclose the respective trademarks. No new matter has been added. Accordingly, Applicants submit that this objection should be withdrawn.

**Objections to the Claims**

Claims 1 and 5-17 stand objected to because of the following informalities asserted by the Examiner: the term "plane" [claim 1, line 1] and other occurrences] should be replaced with either the term "planar" or the term "plain" in order to be idiomatically and grammatically correct. The Examiner further asserts that none of the aforementioned terms

Docket No. 740709-507  
Application No.: 10/628,240  
Page 13 of 15

are supported by the originally filed disclosure and suggests that the term "plane" should be removed from the claims. However, as is stated above, claim 1 as amended no longer recites this term. In addition, claims 9-17 have been canceled. Accordingly, Applicants submit that this objection is overcome, and should be withdrawn.

Claims 8-17 stand objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. However, Applicants respectfully submit that claim 8 as amended herein further limits claim 1, and is a proper dependent claim. In addition, claims 9-17 have been canceled. Accordingly, Applicants submit that this objection is overcome, and should be withdrawn.

**Rejections of the Claims under 35 U.S.C. § 112**

Claims 1 and 5-17 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner asserts that claim 1 recites that the flexible heat exchanger "comprises a linear expansion coefficient of MD, TD and an average of MD and TD, in the range of  $10 \times 10^{-6}$  to  $35 \times 10^{-6}$  cm/cm/°C at 50-200°C", and that there is no support in the originally filed disclosure for the flexible heat exchanger having either a linear expansion coefficient or a linear expansion coefficient within the cited range. However, claims 1 and 8 as amended now recite that the "flexible multilayer thermoplastic polyimide films" comprise a linear expansion coefficient of MD, a linear expansion coefficient of TD and an average of linear expansion coefficients of MD and TD, in a specified range. There is clear support for this limitation throughout the specification, for example, on page 5, lines 3-5. In fact, the Examiner even pointed to this portion of the Specification when making the rejection. In addition, the Examiner asserts that the claimed term "plane" is not supported by the specification. As is stated above, claim 1 as amended no longer recites this term. Thus, Applicants respectfully submit that claims 1 and 5-8 satisfy the written description requirement of 35 U.S.C. § 112, first paragraph.

Claims 1 and 5-17 also stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner asserts that claim 1 recites that the flexible heat exchanger "comprises a linear expansion coefficient of MD, TD and an average of MD and TD, in the range of  $10 \times 10^{-6}$  to  $35 \times 10^{-6}$  cm/cm/°C at 50-

Docket No. 740709-507  
Application No.: 10/628,240  
Page 14 of 15

200°C", but the originally filed disclosure fails to either explain or describe what art-known or plain English terms correspond to the acronyms "MD" and "TD" and the originally filed disclosure fails to specify how the flexible heat exchanger is to be constructed so that its linear expansion coefficient is within the aforementioned claimed range.

As is noted above, claims 1 and 8 as amended now recite that the "flexible multilayer thermoplastic polyimide films" comprise a linear expansion coefficient of MD, a linear expansion coefficient of TD and an average of linear expansion coefficients of MD and TD, in a specified range. Also, the paragraph beginning on page 5, line 3, of the Specification has been amended to clearly disclose that "MD" refers to "Machine Direction" and "TD" refers to "Traverse Direction." Thus, claims 1 and 5-8 satisfy the enablement requirement of 35 U.S.C. § 112, first paragraph.

Accordingly, Applicants submit that claims 1 and 5-8 satisfy the requirements of 35 U.S.C. § 112, first paragraph, and, in view of the cancellation of claims 9-17, respectfully request that these rejections be reconsidered and withdrawn.

Furthermore, claims 1 and 5-17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, with regard to claim 1, the Examiner asserts that it is not at all clear whether the limitation "which are in part fused together" appearing in line 6 refers to the surface films facing each other or to the pair of plane flexible thermoplastic films or to some other combination of elements previously recited in the claim. In addition, the Examiner again asserts that it is not clear what is encompassed by the acronyms "MD" and "TD" appearing in line 9 of claim 1.

However, claim 1 as amended recites that "the surface films of the flexible multilayer thermoplastic polyimide films face each other and are in part fused together," which satisfies the requirements of 35 U.S.C. § 112, second paragraph. Also, as is discussed previously, the paragraph beginning on page 5, line 3, of the Specification has been amended to clearly disclose that "MD" refers to "Machine Direction" and "TD" refers to "Traverse Direction." Accordingly, Applicants submit that claims 1 and 5-8 satisfy the requirements of 35 U.S.C. §

RECEIVED  
CENTRAL FAX CENTER

FEB 28 2007

Docket No. 740709-507  
Application No.: 10/628,240  
Page 15 of 15

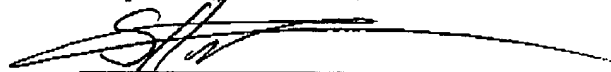
112, second paragraph, and, in view of the cancellation of claims 9-17, respectfully request that this rejection be reconsidered and withdrawn.

**Conclusion**

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,



Stephen M. Hertzler

Date: February 28, 2007

NIXON PEABODY LLP  
Suite 900, 401 9<sup>th</sup> Street, N.W.  
Washington, D.C. 20004-2128  
(202) 585-8000